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FILE 'SCISEARCH' ENTERED AT 14:48:55 ON 13 APR 2005  
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=> s acyl lipid hydrolase  
L1 2 ACYL LIPID HYDROLASE

=> dup rem 11  
PROCESSING COMPLETED FOR L1  
L2 2 DUP REM L1 (0 DUPLICATES REMOVED)

=> s acyl lipid hydrolase and dna  
L3 1 ACYL LIPID HYDROLASE AND DNA

=> d 12 13 ibib ab  
L3 IS NOT VALID HERE  
For an explanation, enter "HELP DISPLAY".

=> d 12 1-2 ibib ab

L2 ANSWER 1 OF 2 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN  
ACCESSION NUMBER: 2004-08220 BIOTECHDS  
TITLE: Deployment of non-transgenic refuge crop into field of  
transgenic pest resistant crops by blending transgenic crop  
seeds with non-transgenic refuge crop seeds and ensuring  
uniform mixing, and planting the mix in field;  
pesticide agent for transgenic plant treatment  
AUTHOR: PERSHING J C; SACHS E S; SANDERS E F  
PATENT ASSIGNEE: PERSHING J C; SACHS E S; SANDERS E F  
PATENT INFO: US 2003186813 2 Oct 2003  
APPLICATION INFO: US 2003-394929 19 Mar 2003  
PRIORITY INFO: US 2003-394929 19 Mar 2003; US 2000-238405 6 Oct 2000  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: WPI: 2004-088919 [09]

AB DERWENT ABSTRACT:

NOVELTY - Deployment of non-transgenic refuge crop into a field of  
transgenic pest resistant crops comprising blending transgenic pest  
resistant crop seeds with non-transgenic refuge crop seeds, ensuring a  
uniform mixing of transgenic and non-transgenic crop seeds, and planting  
the mix in a field, is new. The mixture consists of 100-50 % transgenic  
pest resistant crop seed.

ACTIVITY - Pesticidal; Insecticidal.

MECHANISM OF ACTION - None given.

USE - The invention is used for deploying a non-transgenic refuge  
crop into a field of transgenic pest resistant crops.

ADVANTAGE - The invention effectively reduces labor, costs and  
management required to deploy a refuge to recombinant crops.

EXAMPLE - Seed mixture comprising non-transgenic seed and transgenic

seed in a ratio of 80:20 was prepared, and hand-planted. Results showed that this mixture was effective at reducing rootworm populations, and had least number of emerged beetles. (22 pages)

L2 ANSWER 2 OF 2 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

ACCESSION NUMBER: 2001-14428 BIOTECHDS

TITLE: Modified potato patatin proteins with reduced antigenicity, useful as insecticides for controlling e.g. round worm and root worm; vector-mediated de-allergenized acyl-lipid-hydrolase gene transfer and expression in plant or bacterium host cell or transgenic plant for recombinant protein production, insecticide or food-additive

AUTHOR: Alibhai M F; Astwood J D; McWherter C A; Sampson H A

PATENT ASSIGNEE: Monsanto

LOCATION: St. Louis, MO, USA.

PATENT INFO: WO 2001049834 12 Jul 2001

APPLICATION INFO: WO 2001-US342 5 Jan 2001

PRIORITY INFO: US 2000-174669 6 Jan 2000

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: WPI: 2001-441874 [47]

AB Modified proteins (especially potato patatins) that maintain enzymatic and insecticidal activity but which have reduced allergenicity are claimed. Groups (especially Tyr) which bind to patatin-specific antibodies are identified and glycosylation sites involved in antibody binding are removed via site-directed mutagenesis. Also claimed are: an isolated de-allergenized acyl-lipid-hydrolase

(I) encoded by 2 DNA sequences (S1 and S2) given in the specification; a DNA sequence (II) encoding (I); a plant or bacterium host cell containing (II); a transgenic plant containing (II) delivered in a recombinant vector; preparing a transgenic plant transformed to produce a protein modified to exhibit reduced allergen eliciting properties when consumed in the diet of a human allergic to the unmodified protein; and a recombinant vector containing (II). (I) is particularly used for inhibiting the activity of maize round worms. De-allergenized protein can be used as insecticides, as food-additives and as immunizing agents. (I) contains 1 or more of 22 defined protein sequences given in the specification. (222pp)

=> s insect inhibitory activity

L4 9 INSECT INHIBITORY ACTIVITY

=> dup rem 14

PROCESSING COMPLETED FOR L4

L5 7 DUP REM L4 (2 DUPLICATES REMOVED)

=> s 15 and dna

L6 3 L5 AND DNA

=> d 16 1-3 ibib ab

L6 ANSWER 1 OF 3 HCPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:220636 HCPLUS

DOCUMENT NUMBER: 136:260137

TITLE: Fusion products of .delta.-endotoxins CryET33, CryET34, tIC100 or tIC101 of *Bacillus thuringiensis* for improved resistance to boll weevil in cotton and transgenic plants

INVENTOR(S): Gouzov, Victor M.; Malvar, Thomas M.; Roberts, James K.; Sivasupramaniam, Sakuntala

PATENT ASSIGNEE(S): Monsanto Technology, L.L.C., USA

SOURCE: PCT Int. Appl., 142 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002022662	A2	20020321	WO 2001-US28746	20010912
WO 2002022662	A3	20030313		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2001090919	A5	20020326	AU 2001-90919	20010912
US 2004023875	A1	20040205	US 2003-380077	20030307
PRIORITY APPLN. INFO.:				
US 2000-232099P P 20000912				
WO 2001-US28746 W 20010912				

AB Coleopteran inhibitory crystal proteins are disclosed comprising a two-component toxin fusion protein, both of which are required for biol. activity. Various methods of linking both components together, so that a single protein provides **insect inhibitory activity**, are disclosed. More specifically, novel *Bacillus thuringiensis* nucleic acid sequences encoding boll weevil-inhibitory  $\delta$ -endotoxins designated CryET33, CryET34, tIC100 (29-kDa) and tIC101 (14-kDa). The amino acid sequences of tIC100 and tIC101 are 74% and 83% similar to CryET33 and CryET34, resp. Fusion proteins CryET33/CryET34, tIC100/tIC101, CryET33/tIC101 and CryET34/tIC100 were constructed for use as insecticidal compns. Methods of making and using nucleic acid sequences in the development of the transgenic plant cells contg. the novel nucleic acid sequences are disclosed herein. A compn. comprising an insecticidally effective amt. of the said  $\delta$ -endotoxin polypeptides may be formulated as a powder, dust, pellet, granule, spray, emulsion, colloid or soln. The said compns. may be prep'd. by dessication, lyophilization, homogenization, extn., filtration, centrifugation, sedimentation or concn. Furthermore, this compn. may be prep'd. from a bacterial cell pellet, cell suspension, cell homogenate, cell lysate, cell supernatant, cell filtrate or cell pellet. The said insecticidal polypeptide may be present in a concn. of about 0.001%-99% by wt.

L6 ANSWER 2 OF 3 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN  
 ACCESSION NUMBER: 2004:44958 BIOSIS  
 DOCUMENT NUMBER: PREV200400046408  
 TITLE: Insect inhibitory lipid acyl hydrolases.  
 AUTHOR(S): Alibhai, Murtaza F. [Inventor, Reprint Author]; Rydel, Timothy J. [Inventor]  
 CORPORATE SOURCE: St. Charles, MO, USA  
 ASSIGNEE: Monsanto Technology LLC  
 PATENT INFORMATION: US 6657046 December 02, 2003  
 SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Dec 2 2003) Vol. 1277, No. 1.  
<http://www.uspto.gov/web/menu/patdata.html>. e-file.  
 ISSN: 0098-1133 (ISSN print).

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 ENTRY DATE: Entered STN: 14 Jan 2004  
 Last Updated on STN: 14 Jan 2004

AB The present invention discloses **DNA** sequences encoding plant and novel lipid acyl hydrolase proteins having coleopteran specific **insect inhibitory activity**, as well as variants and permuteins having enhanced levels of activity directed to controlling coleopteran insect infestation and enhanced levels of expression in planta. Additionally, catalytic dyad active site conformation is disclosed for both dicot and monocot plant derived non-specific lipid acyl hydrolases having coleopteran insect inhibitory properties.

L6 ANSWER 3 OF 3 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

ACCESSION NUMBER: 2000:196140 BIOSIS  
DOCUMENT NUMBER: PREV200000196140  
TITLE: Molecular characterization of a new arcelin-5 gene.  
AUTHOR(S): Gerhardt, Isabel R.; Paes, Norma S.; Bloch, Carlos, Jr.;  
Mendes, Paulo A.M.; Leite, Adilson; Chrispeels, Maarten J.;  
de Sa, Maria Fatima Grossi [Reprint author]  
CORPORATE SOURCE: Embrapal/Cenargen, Brasilia, DF, Brazil  
SOURCE: Biochimica et Biophysica Acta, (Jan. 31, 2000) Vol. 1490,  
No. 1-2, pp. 87-98. print.  
CODEN: BBACAQ. ISSN: 0006-3002.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 17 May 2000

Last Updated on STN: 4 Jan 2002

AB Arcelins are insecticidal proteins found in some wild accessions of the common bean, *Phaseolus vulgaris*. They are grouped in six allelic variants and arcelin-5 is the variant with the highest inhibitory effect on the development of *Zabrotes subfasciatus* larvae. Characterization of the protein and its genes resulted in the identification of three polypeptides and the isolation of two genes that encode the Arc5a and Arc5b polypeptides. Here we describe a new gene, Arc5-III. The protein it encodes has 81% amino acid identity with the derived amino acid sequences of Arc5-I and Arc5-II. The Arc5-III gene is highly expressed in developing seeds and at a much lower level in roots. Data obtained by a combination of two-dimensional gel electrophoresis, protein sequencing and MALDI-TOF mass spectrometry analysis support the conclusion that Arc5-III encodes a polypeptide present in Arc5c band. Using ion-exchange chromatography, three fractions containing arcelin-5 polypeptides were eluted by increasing the salt concentration. The three fractions contain various amounts of the three arc-5 polypeptides and inhibit the growth of *Zabrotes subfasciatus* larvae differentially, suggesting differences in insecticidal activity among the arcelin-5 isoforms.

=> d his

(FILE 'HOME' ENTERED AT 14:47:59 ON 13 APR 2005)

FILE 'MEDLINE, EMBASE, HCPLUS, BIOSIS, BIOTECHDS, SCISEARCH' ENTERED AT  
14:48:55 ON 13 APR 2005

L1 2 S ACYL LIPID HYDROLASE  
L2 2 DUP REM L1 (0 DUPLICATES REMOVED)  
L3 1 S ACYL LIPID HYDROLASE AND DNA  
L4 9 S INSECT INHIBITORY ACTIVITY  
L5 7 DUP REM L4 (2 DUPLICATES REMOVED)  
L6 3 S L5 AND DNA

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	20.03	20.45
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.73	-0.73

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L1: Entry 1 of 1

File: USPT

Oct 28, 2003

US-PAT-NO: 6639054DOCUMENT-IDENTIFIER: US 6639054 B1

TITLE: Preparation of deallergenized proteins and permuteins

DATE-ISSUED: October 28, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Alibhai; Murtaza F.	Chesterfield	MO		
Astwood; James D.	Eureka	MO		
McWherter; Charles A.	Chesterfield	MO		
Sampson; Hugh A.	Larchmont	NY		

US-CL-CURRENT: 530/350; 424/171.1, 435/417, 435/418, 436/513, 504/116.1

## CLAIMS:

What is claimed is:

1. An isolated and purified polypeptide sequence exhibiting corn rootworm insect inhibitory activity and acyl lipid hydrolase activity comprising the peptide sequence as set forth in SEQ ID NO: 247.

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L1: Entry 1 of 1

File: USPT

Dec 2, 2003

US-PAT-NO: 6657046DOCUMENT-IDENTIFIER: US 6657046 B1

TITLE: Insect inhibitory lipid acyl hydrolases

DATE-ISSUED: December 2, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Alibhai; Murtaza F.	Chesterfield	MO		
Rydel; Timothy J.	St. Charles	MO		

US-CL-CURRENT: 530/350; 424/94.6, 435/195

## CLAIMS:

What is claimed is:

1. An isolated peptide exhibiting lipid acyl hydrolase activity and corn rootworm insect inhibitory bioactivity and consisting of the amino acid sequence as set forth in SEQ ID NO:21.

2. An isolated peptide consisting of the amino acid sequence as set forth in SEQ ID NO:21.

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1. Document ID: US 6657046 B1

L2: Entry 1 of 4

File: USPT

Dec 2, 2003

US-PAT-NO: 6657046

DOCUMENT-IDENTIFIER: US 6657046 B1

TITLE: Insect inhibitory lipid acyl hydrolases

DATE-ISSUED: December 2, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Alibhai; Murtaza F.	Chesterfield	MO		
Rydel; Timothy J.	St. Charles	MO		

US-CL-CURRENT: 530/350; 424/94.6, 435/195

<a href="#">Full</a>	<a href="#">Title</a>	<a href="#">Citation</a>	<a href="#">Front</a>	<a href="#">Review</a>	<a href="#">Classification</a>	<a href="#">Date</a>	<a href="#">Reference</a>	<a href="#">Claims</a>	<a href="#">KUMC</a>	<a href="#">Drawn By</a>
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2. Document ID: US 6639054 B1

L2: Entry 2 of 4

File: USPT

Oct 28, 2003

US-PAT-NO: 6639054

DOCUMENT-IDENTIFIER: US 6639054 B1

TITLE: Preparation of deallergenized proteins and permuteins

DATE-ISSUED: October 28, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Alibhai; Murtaza F.	Chesterfield	MO		
Astwood; James D.	Eureka	MO		
McWherter; Charles A.	Chesterfield	MO		
Sampson; Hugh A.	Larchmont	NY		

US-CL-CURRENT: 530/350; 424/171.1, 435/417, 435/418, 436/513, 504/116.1

<a href="#">Full</a>	<a href="#">Title</a>	<a href="#">Citation</a>	<a href="#">Front</a>	<a href="#">Review</a>	<a href="#">Classification</a>	<a href="#">Date</a>	<a href="#">Reference</a>	<a href="#">Claims</a>	<a href="#">KUMC</a>	<a href="#">Drawn By</a>
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3. Document ID: US 6551962 B1

L2: Entry 3 of 4

File: USPT

Apr 22, 2003

US-PAT-NO: 6551962

DOCUMENT-IDENTIFIER: US 6551962 B1

TITLE: Method for deploying a transgenic refuge

DATE-ISSUED: April 22, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pershing; Jay C.	Webster Groves	MO		
Sachs; Eric S.	Chesterfield	MO		
Sanders; Ernest F.	Lake St. Louis	MO		

US-CL-CURRENT: 504/100[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [K08C](#) | [Drawn D](#) 4. Document ID: US 6501009 B1

L2: Entry 4 of 4

File: USPT

Dec 31, 2002

US-PAT-NO: 6501009

DOCUMENT-IDENTIFIER: US 6501009 B1

TITLE: Expression of Cry3B insecticidal protein in plants

DATE-ISSUED: December 31, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Romano; Charles P.	Medfield	MA		

US-CL-CURRENT: 800/302; 435/252.3, 435/320.1, 435/412, 435/418, 435/419, 536/23.7,  
536/23.71, 800/279, 800/288, 800/320.1[Full](#) | [Title](#) | [Citation](#) | [Front](#) | [Review](#) | [Classification](#) | [Date](#) | [Reference](#) | [Claims](#) | [K08C](#) | [Drawn D](#)[Clear](#)[Generate Collection](#)[Print](#)[Fwd Refs](#)[Bkwd Refs](#)[Generate OACs](#)

Terms

Documents

acyl lipid hydrolase

4

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<input type="checkbox"/>	L4	L3 and dna	9
<input type="checkbox"/>	L3	acyl lipid hydrolase	10

*DB=USPT; PLUR=YES; OP=ADJ*

<input type="checkbox"/>	L2	acyl lipid hydrolase	4
<input type="checkbox"/>	L1	6,639,054	1

END OF SEARCH HISTORY